

Engineering properties of the soil of Sana'a, the Yemen Arab Republic

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Abstract: The study consisted of both field and laboratory investigation programs in an area of about 100 km². Based on these investigations, 7 different soil units with their distributions and active depositional systems were identified. Soil profiles were constructed, and geotechnical properties, mineralogical and chemical compositions, and soil fabrics were established. The predominant minerals were quartz, calcite, albite and kaolinite; high contents of calcium carbonate, acting as a cementing agent, were also found. Three common microstructures, namely metastable, oriented and conglomerate fabrics, were observed.